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REVIEW ARTICLE

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Debriefing as an opportunity to develop emotional competence in health profession students: faculty, be prepared!

Debriefing como uma oportunidade de desenvolver competência emocional em estudantes da área da saúde: docentes, preparem-se!

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ABSTRACT

AIMS: In this article, we want to share our perspective on how simulation sessions could contribute to change reality, building a safe environment in which facilitators can role-modeling students to develop emotional competence. Noteworthy, acknowledging and legitimating emotions are also essential components of creating a safe environment for students. We also intend to stress how faculty development programs are essential to guarantee that facilitators will be prepared to accomplish this new learning goal, and how different cultural contexts can influence the process.

METHODS: In this narrative review, we will focus on the importance of emotions. Emotions in the context of learning but also learners' emotions from the viewpoint of teachers, and teachers' emotions in the context of faculty development.

RESULTS: Simulation in medical education is becoming increasingly important. Advances in technology give many opportunities to simulate almost anything you want, with high fidelity and enhanced reality. It creates the possibility of bringing the complexity of real clinical tasks to a controlled simulated environment. While performing these complex simulated tasks, students experience several and sometimes distinct emotions: the emotions of patients and their families, the emotions of the multi-professional team members, and their own emotions, as learners and as future health professionals. Unfortunately, the formal curricula of the majority of medical schools do not address the importance of emotional competence specifically, and students end with the general impression that emotions are mainly negative, and must be avoided and kept at a safe distance. However, there are plenty of data showing how emotions can influence learning and decision-making, and how important it is to create awareness of and modulate them to guarantee the safeguard of patients' interests.

CONCLUSIONS: Emotions directly affect several dimensions of clinical work, such as communication, decision-making, teamwork, and leadership. We hope that including dealing with emotions as a natural goal of the learning activities in the health professions can catalyze the reconciliation between the technical and emotional aspects of clinical practice.

KEYWORDS: simulation; medical education; faculty; emotions.

RESUMO

OBJETIVOS: Neste artigo, pretendemos compartilhar nossa perspectiva em relação a como a simulação pode ajudar a transformar a realidade, construindo um ambiente seguro em que os facilitadores das sessões de simulação sejam os modelos em que os estudantes podem se espelhar para desenvolver competência emocional. Vale ressaltar que reconhecer e dar legitimidade às emoções é passo essencial para a criação de um ambiente seguro para os estudantes. Também pretendemos reforçar como os programas de capacitação docente são fundamentais para garantir que os facilitadores estarão preparados para atingir esse novo objetivo de aprendizagem, e como contextos culturais diferentes podem influenciar esse processo.

MÉTODOS: Nesta revisão narrativa, nos concentraremos na importância das emoções. Emoções no contexto da aprendizagem, mas também emoções dos aprendizes do ponto de vista dos professores, e emoções dos professores no contexto do desenvolvimento do corpo docente.

RESULTADOS: A simulação está se tornando cada vez mais importante na educação médica. Os avanços tecnológicos permitem simular praticamente qualquer situação, com alta fidelidade e realidade. Isso cria a possibilidade de trazer a complexidade de situações clínicas reais para um ambiente simulado e controlado. Ao executar essas simulações de alta complexidade, os estudantes experimentam várias e diferentes emoções: as emoções dos pacientes e de suas famílias, as emoções dos membros da equipe, e as suas próprias emoções, como estudantes e como futuros profissionais da saúde. Infelizmente, a grade curricular formal da maioria das escolas médicas não aborda especificamente a importância de desenvolver competência emocional, e os estudantes acabam com a impressão geral de que as emoções são basicamente negativas, e que devem ser evitadas e mantidas a uma distância de segurança. No entanto, vários estudos mostram como as emoções influenciam o aprendizado e a tomada de decisões, e como é importante estar consciente delas e modulá-las de uma forma que garanta a salvaguarda dos interesses dos pacientes.

CONCLUSÕES: As emoções afetam diretamente várias dimensões do trabalho clínico, como comunicação, tomada de decisão, trabalho em equipe e liderança. Esperamos que tratar das emoções como meta natural das atividades de aprendizagem nas profissões da saúde oportunize catalisar a reconciliação entre os aspectos técnicos e emocionais da prática clínica.

DESCRITORES: simulação; educação médica; docentes; emoções.

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INTRODUCTION

With advancing technology, simulation in medical education is rapidly expanding from simple simulators to high fidelity simulation, virtual reality, augmented reality, and further [1]. The incorporation of these technological developments should not undermine the importance of mastering and applying the well-established educational principles of adult learning [2-4]. For instance, in simulation, feedback and debriefing are considered vital in the learning process, and teacher-facilitators play a major role in building a safe environment, in which students can openly and collectively address their strengths and frailties [3, 5, 6]. In this narrative review, we will focus on the importance of emotions. Emotions in the context of learning but also learners' emotions from the viewpoint of teachers, and teachers' emotions in the context of faculty development.

Every teacher who had the experience of facilitating a debriefing session is familiar with the rich and diverse emotional responses of health professional students during and after simulation sessions. Unfortunately, in general, emotions are a neglected aspect of medical training and practice [7]. Although there are several studies in the field of education and cognitive psychology showing the influence emotions have on decision-making and learning, most medical curricula around the world still not address it adequately [8-11]. Emotions are also a significant component of our well-being and directly influence our satisfaction as health professionals [12]. Finally, professional satisfaction can affect the quality of patient care [13, 14].

In the real clinical setting, the complexity of the environment and of the professional interactions, associated with time constraints and demand overload represent real obstacles to clinical teachers in mapping all the possible learning opportunities [15]. In this context, clinical teachers tend to focus their feedback on the technical elements of the performance, and emotions and emotion regulation are usually left aside. However, it is becoming clear to medical educators that the avoidance of emotions can contribute to a state of emotional dissonance in medical students, which can hinder the development of their professional identities [11, 16]. Furthermore, emotion suppression is counterproductive, since, in general, it exacerbates the initial emotional state and elicits detrimental physiologic responses, apart from increasing the cognitive load and impairing memory [17-19].

Nowadays, simulation sessions can reproduce real-life complexity, and can also evoke similar emotions of real-life tasks, but in a different, more controlled and programmed educational context [20]. Facilitators have the opportunity and time to address the professional performance as a whole, delivering feedback on the technical aspects, but also offering students the chance to reflect on their emotions. Not only the emotions evoked during the simulated sessions, but also the emotions presented during the debriefing sessions.

Students' awareness of their own emotions as learners and future health professionals contributes to their understanding of the influence these feelings can have on their decision-making process and professional interactions [11]. This awareness is also essential to improve teamwork and to develop empathy [21]. Finally, students who reflect on their emotions have the opportunity to reconcile their emotional and professional development, which are often hampered by emotional avoidance [16].

SIMULATION AND EMOTIONS

Simulation scenarios can be complex, particularly when designed to reproduce critical clinical situations, with different elements, such as difficult decision-making, moral dilemmas, and complicated interactions with patients, families, or members of the multi-professional team. The most challenging scenarios are planned to address several of these elements during the same session [22]. These situations are highly emotional, and demand for emotional competence from the participants. However, in general, facilitators and curricular designers seem to believe that health professional students will naturally develop emotional competence, missing opportunities to address it explicitly in learning activities.

The preponderant subliminal message is to ignore and avoid emotions, as much as possible [23]. This avoidance occurs at several levels. At the individual level, students in particular and health professionals in general, do not have a safe environment to reflect on their own emotions, which can drive to a state of identity dissonance, related to burnout and professional dissatisfaction [16]. At the team level, professional relationships are supposed not to have an emotional dimension, and different emotional dynamics are hindered, potentially impairing good communication [24]. At the performance level, patients can experience health professionals with low levels of empathy, particularly in its affective dimension [24]. Noteworthy, several educators believe that students would benefit from reflecting on their emotions while developing their professional identities [11]. The

emotion avoidance also permeates the relationship between teacher and student, and faculty development programs do not address the emotional development of the teacher or prepare the teacher to deal with the emotions of the students. This process ends in a vicious cycle that reproduces the actual culture, which promotes emotion suppression [7].

Emotions can affect decision-making and also influence learning, either positively or negatively [25]. Emotions can affect the way we receive and accept negative feedback, which has a direct effect on the way students deal with debriefing [26]. According to Lerner et al. [8], emotions can shape decisions via the content and the depth of the thought, via goal activation and can influence interpersonal decision-making. In their paper they describe that regarding the content of the though, angry, for instance, can make people interpret negative events as a consequence of an evil act of another person, while fear can make the same events understood as a consequence of an unpredictable situation. The depth of the thought can also be affected by emotions: negative moods can increase analytic reasoning, while positive moods can trigger heuristic reasoning. Goal activation is a process in which the emotional state changes your reaction towards a specific subject. Sadness can stimulate a high-risk behavior because it is associated with a feeling of loss, which relates to a tendency to change one's circumstances, seeking for rewards, even when they are improbable. As emotions are an adaptive response to social interactions, it is clear that our decisions on social interactions occur under the influence of our emotional state [8].

We believe that since simulations' scenarios are realistic learning activities, they represent a single opportunity to discuss the role of emotions in clinical practice. Facilitators can discuss and demonstrate how to cope with emotions, internally and externally, to safeguard patients' interests. The emotional responses of the students are an opportunity to reflect on the impact of emotions on patient care, teamwork, decision-making, and on health professionals' well-being.

In a recent study, Schweller et al. [27] described the importance of dealing with emotions during a debriefing after a simulated patient encounter. Discussing the impact of the patients' emotions on the student as well as discussing the students' feelings was well appreciated by the students, and they acknowledged that understanding emotions and having empathy were important learning objectives they thought they would apply after their simulated patient encounter [27].

DEBRIEFING, MOTIVATION AND EMOTIONAL SAFETY

Debriefing

Debriefing is considered a key component of simulation design [28]. It is based on reflecting on the participants' experience. Participants in a simulation environment are supposed to combine their cognitive and procedural knowledge, with their social and medical skills. The facilitator should be instructed to guide this process according to a preset format, to optimize the learning opportunities. Different learning theories can be used as a conceptual framework while planning a simulation session [29]. Social constructivism is a theory that understands learning as an active process of creating meaning through learners' engagement with lived experiences [4, 30-32]. The process of learning in this view is active, constructive, self-controlled, social and situational [33]. The debriefing as part of this process should, therefore, stimulate reflection.

Many formats of debriefing have been developed. In a recent paper, Sawyer et al. [34] reviewed the most relevant healthcare debriefing methods. They structured their review around four topics: timing (during or after), facilitation (by a facilitator or by the participants themselves), conversational structure (three or more phases) and process elements (such as a safe environment, or video review). In their report, they state that "differences among the conversational structures were noted in the inclusion of a time to deal with reactions and/or emotions." And that "some frameworks intentionally omit a reaction phase, with the belief that medical professionals are accustomed to dealing with stressful clinical situations…" Most debriefing literature, however, acknowledges the importance of starting the session asking the students to talk about their emotional response aiming at psychological safety: let the emotions get out, 'blowing off steam' [34]. It is our opinion that, although 'on paper' emotions are addressed, this often does not go beyond the surface. The intention is to provide relief and not to reflect on how emotions influenced their behavior, or how they can modulate emotions to enhance their performance. It is as if emotions were an obstacle to be surpassed to talk about the real, measurable and concrete learning goals. The question thus arises whether addressing emotions just as a part of the formal debriefing procedure is an efficient way of addressing emotions or only a matter of checking the box.

Motivation and Emotional Safety

Feedback is supposed to encourage the learning process, but it can be questioned whether it also supports the intrinsic motivation to learn [35]. According to the self-determination theory, intrinsic motivation relies on three essential factors: autonomy, competence, and relatedness [36-38]. It is important to realize that the feedback as given during debriefing may affect individuals' sense of competence in a positive as well as in a negative way, which can sometimes hinder the intrinsic motivation to learn [35]. To sustain the motivation, this eventual feeling of incompetence should be balanced by the relationships with the teacher and also within the group. Building a credible and trustful relationship between the teacher and the student is crucial to assure a positive feedback outcome [39]. The question we propose is: Is it possible to create trustiness when emotions are hidden or unspoken?

To remember your performance during the debriefing, realizing what went wrong and why, can be challenging, and emotional [26]. It is also difficult for health professional students to understand how their conduct affected the performance of the team and the outcome of the simulated scenario or patient. Particularly tricky is to revisit your performance in the context of a group, which can increase students' sense of vulnerability and incompetence. If individuals feel strong emotions interfering with their willingness to share their experience and their openness, this may hamper their own and the groups' learning. Learning is a social enterprise, which demands interactions among individuals [40]. Next to a direct effect on the learning, emotions may also affect the cognitive load of the session because you have to spend time and attention in regulating them in the context of the group [25].

Therefore, debriefing efficacy relies on the creation of a safe environment, in which students feel free to share their experiences, feelings, and thoughts [3, 28, 41, 42]. Facilitators must recognize, acknowledge and give legitimacy to students' difficulties, and also to students' emotional responses. Noteworthy, emotional reactions play a pivotal role and influence interactions in a group and thus the relatedness individuals experience by participating in the group [41, 42]. Assuring a positive tone of the interactions and creating opportunities to share uncomfortable feelings when they are present help the group to share and build new knowledge. We believe that not addressing emotions directly can hinder the efficiency of the simulation session because emotions can affect learning negatively, and also can foster a state of emotional dissonance and alexithymia.

DEBRIEFING EMOTIONS

We are advocating to deepen the discussion about emotions during the debriefing sessions in three different perspectives. First, to explicitly address the role of emotions in teamwork, decision making and performance whenever it is significant for the idealized simulation scenario, preventing emotion avoidance. Second, to develop specific simulation scenarios to create opportunities to discuss the role of emotions in health care and health professionals' practice, aiming the development of emotional competence. Finally, to make students aware of their own emotional development, scaffolding their professional identity formation and preventing identity dissonance.

We believe that discussing technical performance together with emotional responses can show students how these two elements are connected and how difficult and artificial is to separate them into two different learning goals. We also believe that the main obstacle to address emotions systematically and adequately during debriefing sessions is that the majority of our teachers/facilitators were not trained to value emotions during the clinical activities neither in the planned debriefing sessions [23].

FACULTY DEVELOPMENT FOR "DEALING WITH EMOTIONS"

In medical education, one has to make choices regarding the what, the how, the when and the why, and make these choices explicit. These choices are dictated by the chosen educational philosophy and amongst others dictated by financial constraints. Like in assessment, one could transfer van der Vleuten's utility formula to faculty development for debriefing [43]. Also in here reliability, validity and educational impact, as well as important variables such as acceptability and cost, should be taken into account. The use of validity and reliability is common in assessment and may seem odd in this context. We argue, however, that validity of the content, the construct validity relating to its authenticity as well as its credibility, are important when dealing with professionals taking part in a training session. Furthermore, the goals we are aiming at with our faculty development should be clear and the effect of the training should be reproducible. In other words, one must be able to rely on the impact of the training. In addition to and related

with acceptability, one could or even should explicitly add emotional response and culture to this formula. Therefore, the social and institutional culture must be considered when planning a faculty development program to address emotions in simulation sessions. A utility formula for faculty development could look like this:

$$U = Rw_R \times Vw_V \times Ew_E \times Aw_A.w_{CUL} \times Cw_C \times EMw_{Em}$$

where Reliability (R), Validity (V), Acceptability (A), Costs (C), and Emotions (EM) all have their own weight factors; Acceptability is also determined by the cultural weight factor w_{CUL}.

According to Steinerts' model, faculty development has four quadrants in two axes: one, formal *vs.* informal and the other, group *vs.* individual. Ideally, these four quadrants are organized around a central mentorship program. In most instances, training faculty for debriefing will initially take place in the formal-group quadrant. It is, however, important to realize that teacher-facilitators can learn a lot from individual cases shared with other teacher-facilitators either formal (peer feedback) or informal (community of practice). In setting up a sound faculty development program, it is advisable to consider a longitudinal set-up where formal learning is organized, and informal learning facilitated [44, 45].

For the development of debriefing strategies to deal with emotions, all these approaches can work cooperatively. Formal workshops on emotion regulation and emotion impact on clinical judgment and decision-making are important to share the necessary knowledge to understand the dimension of the field. Facilitators' meetings can create opportunities to participate positive and negative practical experiences, which can provide facilitators a shared repertoire of scenarios and debriefing technics. Meetings are also essential to foster confidence, resilience and the willingness to pursue the accomplishment of this nontraditional learning goal.

It is our opinion that clinical teachers and debriefing facilitators could benefit from the formal and informal interactions with teachers from different backgrounds. In general, teachers with an experience in drama, arts, and humanities, as well as psychologists and educationalists, are more used to address emotions with students, also during learning tasks. The interactions could be planned as group activities but could also be designed as a mentoring program. One could anticipate the innovative approaches that could be developed through fostering these connections and this exchange of expertise. Some of these initiatives were already established and published [46].

Training faculty members to deal with emotions represents a unique challenge. There is no certainty about the best method to address emotions in the health professions education field [11]. Although there are enough data to point out the problem of the negligence of emotions in the curricula, there is a paucity of data on the best strategy to nurture emotional intelligence in students. The risk related to this context is to decide to skip this issue, contributing to maintaining the actual status quo.

We believe that the first step is to motivate facilitators to access and create awareness of their emotional responses and coping mechanisms. It is primordial if they want to scaffold the emotional development of their students. Not only the emotions related to health professions' activities are relevant, but also the emotions associated with the interaction with students, as teachers. This awareness would be primary in the development of an educational strategy. The next step would be to identify a framework to be used as a guide to prepare faculty members to deal with emotions during the debriefing sessions.

Recently, different concepts were proposed as frameworks to scaffold the emotional and professional development of health profession students. The idea of Educational Alliance is inspired by the traditional concept of Therapeutic Alliance initially developed in the field of Psychology. According to this concept, teachers should create a bond with the student, fostering a relationship based on trust and beneficence [39]. The context of feedback can be as important as its content and structure, demanding the consolidation of a safe space where students can bring their concerns and own learning agendas. Creating trust is also related to giving legitimacy to students' emotions, accepting their fears and insecurities.

Emotional intelligence is also an interesting concept and refers to a set of interrelated abilities possessed by individuals to deal with emotions [47]. In other words, the individuals' ability to recognize, use, and regulate emotions [48]. This concept proposes that our emotional responses are as trainable as other aspects of our behavior, and health professionals should master this skill to achieve meaningful, respectful and helpful relationships with patients [49]. The main component of this process is acknowledging and reflecting on emotional responses, searching for insights that can help the positive modulation of future situations. Another important aspect is that people more conscious about their emotional response seems to understand

and predict better the impact of their own emotions on decision-making processes [8, 50]. Finally, emotional intelligent health professionals probably are more able to elicit the desired emotional responses in patients and colleagues and can use this ability to achieve better collaboration and therapeutic plans [8].

Facilitators should also become familiar with and understand the mechanisms of emotion regulation, which is the ability to adapt and modulate emotional experiences. The goal is to promote an emotional response able to change the initial contingencies to foster a more positive outcome. The main mechanism to modulate the emotional response positively is called cognitive reappraisal, in which changing the way we think can change the initial, natural and sometimes painful emotional response. The intention is to reinforce the positive impacts of the emotional experience regarding personal growth and development consciously [51]. Modulating negative emotional responses is important to allow empathetic connections with the other, culminating in pro-social behavior [52]. Positive emotion regulation can also contribute to preventing compassionate fatigue, enabling healthcare providers to focus on the needs of patients, and teachers to focus on students' needs.

Although this idea is essential to value emotion as an important component of health professions competencies and professionalism, it fails on recognizing the social, cultural and relational aspects of emotions. If clinical teachers consider emotions as solely an individual behavior or competence, health profession students could become uncomfortable to share unexpectable or even socially reprehensible emotional reactions. To prevent this collateral effect, it is fundamental to understand emotions also as a social and cultural construct, which helps individuals to interact, communicate and shape their connections with others.

Faculty members aware of the complexity of the interaction between emotions and clinical performance are well positioned to guide students in their process of understanding, coping and applying their emotions on the benefit of a patient-centered practice. Simulation sessions are an unmissable opportunity to open this dialogue among clinical teachers and health profession students.

EMOTIONS AND CULTURE

Although we suggest that emotions should be specifically addressed during debriefing sessions, it is important to be aware of that the way people deal with their own and others' emotions heavily depends on culture. Whereas in one culture talking about and showing emotions is regarded as a weakness, in other cultures it is a token of involvement and highly valued. These specificities should not represent a barrier to start and guide the discussion during the debriefing sessions. Therefore, different cultural backgrounds will demand different and specific skills from the health care provider, and from the facilitator of the sessions. In a globalized world, facilitators should be familiar with the role of emotions in different cultures to achieve the maximum benefit from each simulation session.

Moreover, the way people deal with emotions also affects the way they deal with conflicts [48]. To develop leadership in this context, health professionals must acknowledge their own emotions and the emotions of team members, to create a safe environment in which dialogue is open and efficient. Simulation with students from different professions can provide a unique opportunity to foster collaboration and teamwork while scaffolding the emotional and cognitive development of professional bonds.

CONCLUSIONS

Emotions directly affect several dimensions of clinical work, such as communication, decision-making, teamwork, and leadership. Health profession curricula should explicitly address the role of emotions on clinical practice, to keep up with the recent developments in the field. Concepts such as emotional intelligence, emotion regulation, and educational alliance are essential allies to help teachers to design learning activities to stimulate students to recognize, acknowledge and reflect on their own emotions. These learning activities can also help students to cope with patients', families' and team members' emotions, which is a fundamental step to develop communications skills and empathy.

Simulation represents a unique opportunity to create learning activities devoted to dealing with emotions since it can reproduce real clinical tasks in a more planned and controlled way. Based on the theory, emotions should be taken care of during feedback and debriefing after simulation scenarios, primarily because of the emotional impact on learning and on performance. Therefore, it is pivotal to prepare faculty to adequately deal with and take advantage of the emotional response of students during and after simulation sessions. Structuring your faculty

development program accordingly, using its formal as well as informal aspects should help teachers to address and handle emotions in the learning of their students. We hope that including dealing with emotions as a natural goal of the learning activities in the health professions can catalyze the reconciliation between the technical and emotional aspects of clinical practice.

NOTES

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Conflicts of interest disclosure

The authors declare no competing interests relevant to the content of this article.

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